

REMARKS

Claims 4-72 have been canceled. Claims 1-3 and 73-83 remain in the case. Favorable reconsideration is respectfully requested.

Applicants' undersigned counsel thanks Examiner Lucas for making the March 8, 2005 Office Action non-final. Applicants regret failing to address the Pearce et al. reference in their prior response. The omission has been rectified in the comments presented herein.

With respect to Claims 73-83, Applicants reserve their right to rejoin withdrawn process claims pursuant to the holdings in *In re Brouwer*, 37 USPQ2d 1663 (Fed. Cir. 1996) and *In Re Ochiai*, 37 USPQ2d 1127 (Fed. Cir. 1995). Claims 73-83 are process claims that incorporate the subject matter of Claim 1 (Claim 1 being drawn to a product). Thus, these claims (suitably amended if required) are eligible for rejoinder upon the allowance of a product claim. Applicants also note that Claims 73-83 were re-introduced prior to Final Office Action. Applicants therefore explicitly reserve their right to rejoin Claims 73-83 upon the allowance of an underlying product claim.

Rejection of Claims 1-3 Under 35 USC §103(a) Over Siddigi et al., in View of Olstein et al., Meyer et al., Friedman, and Pearce et al.:

This rejection is respectfully traversed for the reasons articulated in Applicants' prior response and further because there is no motivation provided by the applied references to combine their teachings. The only motivation to combine these references is provided by Applicants' own specification and claims. The Office, however, cannot use Applicants' own specification to provide the required motivation that is lacking in the applied references themselves. Applicants therefore submit that the Office has failed to establish a *prima facie* case of obviousness with respect to these claims.

The Court of Appeals for the Federal Circuit has held that "one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to recreate the claimed invention." See, for example, *In re Fine*, 5 USPQ2d 1596,

1600 (Fed. Cir. 1988). A thorough review of the cited references shows that the Siddigi et al., Olstein et al., Meyer et al., Friedman, and Pearce et al. references are clearly "isolated disclosures." The only motivation to combine these five references, in an effort to recreate the claimed invention, is provided by Applicants' own specification. The required motivation or suggestion to combine is not contained within the references themselves.

For instance, Siddigi et al. describe an analytical method that uses an electrochemically-luminescent transition metal label. However, Siddigi et al. do not even mention the word "bacteriocin" or any synonym for bacteriocin. In short, the primary reference cited in support of this rejection fails entirely to mention one element of the two-element complex currently claimed. Siddigi et al. are completely and wholly silent with regard to bacteriocins.

Olstein et al. do not disclose or suggest any of the bacteriocins that are positively recited in Claim 1 as amended. Olstein et al. do not teach or suggest the use of transition metals in general, nor cobalt in particular, as a detectable label, but rather teach the use of avidin as the label. Further still, Olstein et al. describe a synthetic copolymer having repeating units, wherein one group of monomeric units comprises a binding agent or a binding site for a detectable label. Such a synthetic copolymer has a structure that is completely unrelated to the present invention.

Likewise, Meyer et al. do not teach or disclose the claimed complexes comprising a bacteriocin and cobalt.

Friedman provide a brief discussion of the affinity of lysinoalanine (LAL) for certain metals (at page 1312), but has no discussion at all regarding nisin or the affinity of nisin (or any of the other bacteriocins listed in Claim 1) for transition metals in general or cobalt in particular. However, nisin does not contain an Lys-Ala sequence. Further, Claim 1 as it presently stands does not recite cinnamycin or duramycin. Further still, the Office itself acknowledges that "the teachings of Friedman fail to suggest that nisin would have the same binding properties as the LAL-containing

peptides" (see page 5 of the pending Action). Thus, by the teaching of Friedman has distinct shortcomings.

Lastly, the Office asserts that Pearce et al. teach (at p. 10) that LAL (LAN) has similar metal binding properties to LAL. However, Pearce et al. shows that they compare the acidity and metal binding properties of diaminopropanoic acid (DAPA), 3-[(2-phenylethyl)amino]-L-alanine (LAN), not LAL and LAN as asserted by the Office. Pearce et al. in the right hand column, lines 5-7 that "the three compounds have rather different metal binding constants." Pearce et al. do not teach that LAN has the same metal-binding properties as LAL. Thus, there is no basis for asserting that, in combination with the teachings of Friedman, nisin, also bind cobalt.

Further, the Office provides no reasoning, nor cites any prior art references, why one of skill in the art would combine the teachings of Friedman, Siddigi et al., Olstein et al., and Meyer et al. to form the present invention. Moreove, even if the references are combined, the combination does not teach or suggest the present invention. As stated above, the Office cannot use the App. 1 as a template to pick and choose prior art to deprecate the claimed invention.

Combining the teachings of Siddigi et al. with Olstein et al., Friedman, and Pierce et al. also does not teach the claimed invention. The prior art references fail to render obvious the present claims because none of the references do not suggest that nisin will complex with cobalt. Siddigi et al. do not suggest with regard to bacteriocins. Olstein et al. do not disclose or teach that nisin al. do not teach or disclose the claimed complexes comprising nisin and cobalt. Friedman suggest that only those compound containing nisin are attracted to cobalt. And Pearce et al. do not teach that nisin also bind cobalt. Thus, the entire combination of references does not teach the present invention.

1600 (Fed. Cir. 1988). A thorough review of the cited references shows that the Siddigi et al., Olstein et al., Meyer et al., Friedman, and Pearce et al. references are clearly "isolated disclosures." The only motivation to combine these five references, in an effort to recreate the claimed invention, is provided by Applicants' own specification. The required motivation or suggestion to combine is not contained within the references themselves.

For instance, Siddigi et al. describe an analytical method that uses an electrochemically-luminescent transition metal label. However, Siddigi et al. do not even mention the word "bacteriocin" or any synonym for bacteriocin. In short, the primary reference cited in support of this rejection fails entirely to mention one element of the two-element complex currently claimed. Siddigi et al. are completely and wholly silent with regard to bacteriocins.

Olstein et al. do not disclose or suggest any of the bacteriocins that are positively recited in Claim 1 as amended. Olstein et al. do not teach or suggest the use of transition metals in general, nor cobalt in particular, as a detectable label, but rather teach the use of avidin as the label. Further still, Olstein et al. describe a synthetic copolymer having repeating units, wherein one group of monomeric units comprises a binding agent or a binding site for a detectable label. Such a synthetic copolymer has a structure that is completely unrelated to the present invention.

Likewise, Meyer et al. do not teach or disclose the claimed complexes comprising a bacteriocin and cobalt.

Friedman provide a brief discussion of the affinity of lysinoalanine (LAL) for certain metals (at page 1312), but has no discussion at all regarding nisin or the affinity of nisin (or any of the other bacteriocins listed in Claim 1) for transition metals in general or cobalt in particular. However, nisin does not contain an Lys-Ala sequence. Further, Claim 1 as it presently stands does not recite cinnamycin or duramycin. Further still, the Office itself acknowledges that "the teachings of Friedman fail to suggest that nisin would have the same binding properties as the LAL-containing

peptides" (see page 5 of the pending Action). Thus, by the Office's own admission, the teaching of Friedman has distinct shortcomings.

Lastly, the Office asserts that Pearce et al. teach (at page 713) that lanthionine (LAN) has similar metal binding properties to LAL. However, a close reading of Pearce et al. shows that they compare the acidity and metal-binding constants for diaminopropanoic acid (DAPA), 3-[(2-phenylethyl)amino]-DL-alanine (PEAA) and LAN, not LAL and LAN as asserted by the Office. Pearce et al. state at page 713, left hand column, lines 5-7 that "the three compounds have rather similar acidity and metal binding constants." Pearce et al. do not teach that LAN has the same (or even similar) metal-binding properties as LAL. Thus, there is no basis for the Office's statement that, in combination with the teachings of Friedman, nisin, comprising LAN, would also bind cobalt.

Further, the Office provides no reasoning, nor cites any passages within the references, why one of skill in the art would combine the teachings of Pearce et al., with Friedman, Siddigi et al., Olstein et al., and Meyer et al. In short, there is no reason to combine the references in the first place. Moreover, even if the references are combined, the combination does not teach or suggest the presently claimed invention. As stated above, the Office cannot use the Applicants' own specification as a template to pick and choose prior art to deprecate the claimed invention.

Combining the teachings of Siddigi et al. with Olstein et al., Meyer et al., Friedman, and Pierce et al. also does not teach the claimed invention. The combined references fail to render obvious the present claims because the combined references do not suggest that nisin will complex with cobalt. Siddigi et al. are completely silent with regard to bacteriocins. Olstein et al. do not disclose or suggest nisin. Meyer et al. do not teach or disclose the claimed complexes comprising a bacteriocin and cobalt. Friedman suggest that only those compound containing Lys-Ala will be strongly attracted to cobalt. And Pearce et al. do not teach that nisin, comprising LAN, would also bind cobalt. Thus, the entire combination of references does not suggest the present invention.

For the above reasons, Applicants submit that the rejection of Claims 1-3 under 35 USC §103(a) Siddigi et al., in View of Olstein et al., Meyer et al., Friedman, and Pierce et al. is untenable. Withdrawal of the same is requested.

Rejection of Claims 1-3 Under 35 USC §103(a) Over Siddigi et al., in View of Olstein et al., Meyer et al., Friedman, and Pearce et al. and further in view of Buchman et al.:

This rejection is respectfully traversed because there is no motivation provided by the applied references to combine their teachings to make the claimed invention obvious. Applicants submit that the only motivation to combine these references is provided by Applicants' own specification and claims. The Office, however, cannot use the Applicants' own specification to provide the motivation that is lacking in the applied references themselves. Applicants therefore submit that the Office has failed to establish a *prima facie* case of obviousness with respect to these claims.

As discussed above, there is no motivation to combine the Siddigi et al., Olstein et al., Meyer et al., Friedman, and Pierce et al. references to make the claimed invention obvious (absent an improper use of Applicants' own specification). Further, even if the references are combined, the combined reference do not make the claimed invention obvious to one of skill in the art. For instance, Siddigi et al. do not even mention the word "bacteriocin" or a synonym for bacteriocin. Likewise, Olstein et al. do not disclose or suggest nisin, which is positively recited in Claim 1. Meyer et al. do not teach or disclose the claimed complexes comprising nisin and cobalt. Further, Friedman and Pearce et al. do not teach, either alone or in combination, that nisin, comprising LAN, would bind cobalt. Adding the teachings of Buchman et al. does not correct the deficiencies of the combined teachings of the Siddigi et al., Olstein et al., Meyer et al., Friedman and Pearce et al. references. Buchman et al. teach nothing more than a description of the cloning of nisin.

Thus, Applicants submit that there is no motivation provided by the references themselves to support their being combined to make the claimed invention obvious.

The only motivation to do so is provided by Applicants' own specification. However, Applicants' specification cannot be used by the Office to provide the motivation or suggestion that is lacking in the applied references themselves. Applicants therefore submit that this rejection is improper on its face.

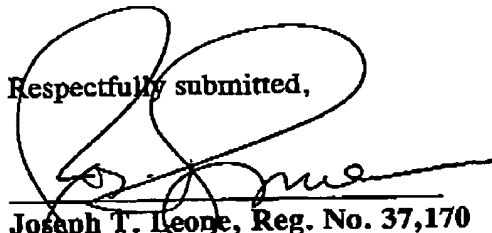
Even if the combination is made, the combined references still fail to render obvious the present claims because the combined references do not suggest that nisin complex with cobalt. Siddigi et al. are completely silent with regard to bacteriocins. Olstein et al. do not disclose or suggest nisin. Meyer et al. do not teach the claimed complexes. Further, Friedman suggest that only those compounds containing Lys-Ala will be strongly attracted to cobalt. Pearce et al. do not teach that LAN has similar binding properties to LAL. And Buchman discloses only the cloned nisin gene, a protein that does not contain the Lys-Ala motif discussed by Friedman. Thus, the combination does not suggest the present invention because the nisin described by Buchman et al. does contain the Lys-Ala noted by Friedman.

Applicants therefore submit that the rejection of Claims 1-3 under 35 USC §103(a) over Siddigi et al., in view of Olstein et al., Meyer et al., Friedman, Pierce et al. and Buchman et al. is improper. Withdrawal of the same is now requested.

CONCLUSION

Applicants respectfully submit that the application is now in condition for allowance. Early notification of such action is earnestly solicited.

Respectfully submitted,



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